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THIS MONTH:

- *Bill On OL With Boot Prog.*

- *Dick On QL Networking*

- *Rudy's "SQ" NOTES*

- *Presidents Message*

- *And Other Great Things*

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NEXT MEETING DATE: 6/08/88

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FOR SALE:

If you have anything for sale, you can advertise it for free in this newsletter (provided you're a SMUG member). Our newsletter reaches an ever-growing number of TS User Groups throughout the country, increasing your chances of a sale.

Dr. Lloyd Dreger has his second "Machine Code" book ready. This book takes up where the last one left off. This book will take you deeper into the intricacies of that monster, machine code programming.

The price will be the same as the other book $16.95 (SMUG members $15.00) plus $1.50 S&H.

The following are the seminars from the 1987 Midwest Computerfest. Prices are $10 for the first seminar and $2 for each seminar after that for up to six seminars. Two tapes can hold all the seminars or a total cost of $40.

"MACHINE CODE FOR THE ZX81"
"DESK TOP PUBLISHING"
"THE FORTH LANGUAGE"
"GRAPHICS ON THE TS2068/SPECTRUM"
"HARDWARE INTERFACING 1"
"HARDWARE INTERFACING 2"
This is Saturday (1) and Sunday (2)
"PRINTER AND PRINTER INTERFACES"
"QL AND SUPERIOR SINCLAIR TECH"
"COMPUSERVE"
"COTTAGE INDUSTRY/ COMPUTER"
"ROUNDTABLE DISCUSSION OF TS TELE"
"COMPUTER LITERACY"

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"SQ" NOTES
BY R.A.HILSMANN

This column is dedicated to the SDOS DISK SYSTEM, or you may call it the OLIGER DISK SYSTEM. Also to the SPECTRUM emulated Timex computer, and SOFTWARE written for either one of the above. Further it will cover the SINCLAIR QL computer as time and need will mandates such coverage. Does this mean that software you will find here will not work in the Timex mode? Of course not, fact is that all software you will find in this column will most likely work in both systems. The hangup may be that some programs will not work properly in the Timex mode, since the Timex has less memory available. The program for this month is written to run only in the TIMEX MODE, since the SPEC-TRUM ROM does not support error trapping, necesarry in this particular program.

I hope you enjoyed the LIBRARY program I had for you last month, which had of course been written for the SDOS DISK SYSTEM. I neglected to mention this last month and hope that all who have ordered or entered same were aware of this. I have updated the program a few times since to version 1.4, which includes the RENAME DISK feature. This will not only rename all the LIBRARY files, but also the DISK. I had found this necessary, since my disk library was a mess.

As all previous programs you had found here, this new version is available to you if you send $ 5 to:
IMPEX SOFTWARE
P.O. BOX 45
MENOMONEE FALLS,WI. 53051

keep in mind that I will send tapes only, since tapes do not come with different tracks and one or two sides etc. besides you'll have a backup on tape if you should ever loose the disk and are not able to recover it with the following program "RECOVER".

```
  1 REM FILL THIS LINE WITH
        1       SPACES
        2    FOR MACHINE CODE
        3
TO HERE>4

 10 REM            -  ‚
    ****************************
    *    DISK RECOVER PROGRAM   *
    *     FOR SAFE DOS (SDOS)    *
    *    ©1988 IMPEX SOFTWARE    *
    *      FOR PUBLIC DOMAIN     *
    *      BY R.A. HILSMANN      *
    ****************************

 20 LET A=0: PAPER A: INK 9: BO
RDER A: CLS : DIM A$(5121): DIM
B$(16): DIM C$(168,20): LET D$="
 ": LET FL=A: GO SUB 480: PRINT
AT 10,A;"Do you need to create a
 new DiskDirectory on the damage
d disk ?"'''‚"    (Yes/No)": INPU
T "Y/N ";Q$: IF Q$="n" OR Q$="N"
 THEN LET FL=1
 30 CLS : GO SUB 480: PRINT AT
10,0;"Insert disk into drive of
your  choice and enter drive num
ber   below. ";
 40 IF NOT FL THEN PRINT "Disk
will be processed   to receive a
 temporary directory"
 50 GO SUB 480: INPUT "WHICH DR
IVE ?? (1 TO 4) ";K: LET /D=K-1
 60 IF NOT FL THEN GO SUB 480:
INPUT "ENTER NEW DISK NAME >";B$
 70 IF NOT FL THEN CLS : GO SUB
 480: PRINT AT 10,0;"DISK WILL B
E PROCESSED NOW"'''"PRESS ENTER W
HEN READY": PAUSE 0
 80 CLS : GO SUB 480: PRINT AT
10,7; FLASH 1;"one moment please
!";AT 15,9;"PROCESSING NOW": FOR
 /1 TO 167: LET C$(A,1 TO 10)="C
YL # "+STR$ A+"    ": LET C$(A,11
 TO )=CHR$ 3+CHR$ 0+CHR$ 20+"Vh
CLS "+CHR$ 24+CHR$ 0+CHR$ 0+CHR$
 1
 90 IF A=1 THEN LET C$(A,19)=CH
R$ 1
100 NEXT : LET K=1: GO SUB 150
110 FOR X=2 TO 167 STEP 2: LET
C$(X,18)=CHR$ K: LET C$(X+1,18)=
CHR$ K: LET K=K+1: NEXT X
120 FOR X=3 TO 167 STEP 2: LET
C$(X,19)=CHR$ 255: NEXT X: LET C
$(168,1)=CHR$ 128
130 IF FL THEN GO TO 190
140 GO TO 180
150 RESTORE 160: FOR X=26715 TO
26834: READ A: POKE X,A: NEXT X
: RETURN
160 DATA 205,10,0,237,176,205,1
42,10,223,42,75,92,17,19,20,25,1
7,16,38,1,16,0,24,232,42,75,92,1
7,43,20,25,17,32,38,1,13,13,24,2
17,42,75,92,17,12,0,25,17,0,62,1
,0,20,237,176,201,42,75,92,17,12
,0,25,1,0,20,62,229,237,161,32,2
52
170 DATA 237,161,32,248,237,161
,200,24,243,42,75,92,17,11,20,25
,1,0,20,62,13,237,169,200,24,251
,42,75,92,17,11,20,1,0,20,25,62,
229,237,169,40,252,62,0,237,169,
192,24,251
```

```
 180 RANDOMIZE USR 26739: RANDOM
IZE USR 26724
 190 LET DR=0: CLS : GO SUB 480:
 PRINT AT 5,0;"DAMAGED DISK WILL
 BE CHECKED     FOR INTACT DATA N
OW, PLEASE          FOLLOW THE PROMPT
S"''"PRESS ENTER WHEN READY": PA
USE 0: LET NEXT=1
 200 ON ERR GO TO 290: LET FL=1
 210 GO SUB 470: LET Z=Z+12: FOR
 X=NEXT TO 167: LET CYL=X: PRINT
 AT 0,25;"CYL ";X: LET D$="CYL #
 "+STR$ X: LOAD /D$CODE Z: IF CO
DE A$(1)=229 AND CODE A$(5120)=2
29 THEN LET FL=0: CLS : PRINT AT
 10,0;"CYLINDER ";X;" IS NOT REC
OVERABLE"'''"CHECKING CYLINDER
";X+1;" NOW"'''"PRESS ZERO (0) T
O EXIT"'''"OR ANY OTHER KEY TO CO
NTINUE ": PAUSE 0: IF INKEY$="0"
 THEN GO TO 490
 220 IF NOT FL THEN NEXT X
 230 CLS : LET FL=1: GO SUB 480:
 PRINT AT 10,0;"CYLINDER ";X;" I
S LOADED NOW"'''"PRESS KEY TO VIE
W DATA ": PAUSE 0
 240 CLS : RANDOMIZE USR 26754:
GO SUB 480: PRINT AT 20,0; INVER
SE 1;"PRESS (P) TO VIEW IN DATA
FORMAT ONE (1) TO VIEW NEXT CYLI
NDER  ";#0;"PRESS ZERO (0) TO RE
STORE DATA ": PAUSE 0: IF INKEY$
="1" THEN GO TO 280
 250 IF INKEY$="P" OR INKEY$="p"
 THEN LET FL=0: CLS : PRINT #0;"
PRESS ZERO (0) TO RESTORE DATA "
': FOR S=1 TO 5120: ON ERR GO TO
300: PRINT A$(S);: IF INKEY$="1"
 THEN GO TO 280
 260 IF INKEY$="0" THEN GO TO 31
0
 270 IF NOT FL THEN NEXT S
 280 NEXT X: STOP
 290 ON ERR RESET : NEXT X
 300 IF NOT FL THEN ON ERR RESET
 : NEXT S
 310 ON ERR RESET : CLS : GO SUB
 480: PRINT AT 5,0;"WHAT KIND OF
 DATA IS IT ?"'''"1) BASIC"'''"2)
 NUMERIC DATA "'''"3) STRING DATA
 "'''"4) MACHINE CODE "'''"5) STAT
E OF MACHINE"'''"6) VARIABLES": I
NPUT K: LET LENGTH=0: LET PROG=0
: LET CL=1: LET DR=DR+1
 320 IF K=5 THEN GO TO 400
 330 CLS : LET A=USR 26770: LET
A=5120-A
 340 IF A>0 THEN PRINT '''" TOTAL
 BYTES SAVED=";A+LENGTH: GO TO 3
60
 350 IF A<=0 THEN LET CL=CL+1: L
ET LENGTH=LENGTH+LEN A$-1: LET X
=X+1: GO SUB 470: LET Z=Z+12: LE
T D$="CYL # "+STR$ X: LOAD /D$CO
DE Z: GO TO 330
 360 LET S=A
 370 IF K=1 THEN LET N=USR 26795
: PRINT '''"PROGRAM LENGTH=";N+LE
NGTH+1;" BYTES": LET PROG=N+LENG
TH+1: GO TO 400
 380 IF NOT K=1 THEN LET N=USR 2
6812: PRINT '''" DATA LENGTH=";N+
LENGTH+1;" BYTES": LET PROG=N+LE
NGTH+1: GO TO 400
 390 NEXT N: STOP

 400 LET D$=CHR$ (K-1): IF K=1 T
HEN LET D$=D$+CHR$ (PROG-256*INT
 (PROG/256))+CHR$ (INT (PROG/256
))+CHR$ 0+CHR$ 64+CHR$ (PROG-256
*INT (PROG/256))+CHR$ (INT (PROG
/256))+C$(CYL,18 TO 19)+CHR$ CL:
 LET C$(DR,11 TO 20)=D$: LET NEX
T=CYL+CL: GO SUB 500: GO TO 200
 410 IF K=2 OR K=3 OR K=4 OR K=6
 THEN LET D$=D$+CHR$ (PROG-256*I
NT (PROG/256))+CHR$ (INT (PROG/2
56))+CHR$ 0+CHR$ 128+C$(CYL,16 T
O 19)+CHR$ CL: LET C$(DR,11 TO 2
0)=D$: LET NEXT=CYL+CL: GO SUB 5
00: GO TO 200
 420 IF K=5 THEN LET D$=D$+CHR$
0+CHR$ 194+CHR$ 0+CHR$ 62+CHR$ 2
30+CHR$ 4+C$(CYL,18 TO 19)+CHR$
10: LET C$(DR,11 TO 20)=D$: LET
CL=10: LET NEXT=CYL+CL: GO SUB 5
00: GO TO 200
 430 STOP
 440 LET DR=DR+1: LET C$(DR,1)=C
HR$ 128
 450 RANDOMIZE USR 26739: CAT
 460 STOP
 470 LET Z=PEEK 23627+256*PEEK 2
3628: RETURN
 480 BEEP .08,35: RETURN
 490 ON ERR RESET : STOP
 500 GO SUB 480: PRINT #0;"PRESS
ANY KEY TO CONTINUE ": PAUSE 0:
RETURN
```

Enter the basic carefully, mak-
ing sure that line 1 is typed in to
the fourth line. This line will
hold the machine code subroutines
to speed up certain sections, and
also the machine code necessary to
manipulate the disk operating
system.

It will help immensely to recov-
er a disk, if a printout of the
catalog for the damaged disk is
available when a recover is neces-
sary. Should such printout not be
available, the process becomes a
guessing game at times. The most
difficulty will be to recognize the
type of data on the disk. State of
the machine is recognized most eas-
ily if a screen of some kind was
saved along with the data. There
are two ways to see what kind of
data you have on a cylinder, the
first being a screen load where the
first part of a state of machine is
where it suspose to be, even if the
screen had no data on it. it would
look black.

Pressing the "p" key will let
you see other data, for instance
basic or data is best recognized

that way. A machine code program has its own peculiar look, as you can see in the next column.

I strongly recomend to take a disk with known data on it, copy the catalog to a printer, then copy the disk to another using the MOVE/ command, and practice on this copied disk. This will give you the feel for the program, and the type data you may encounter. It would probably be best to copy a disk with different types of data on it, this would really give you an idea what each type looks like.
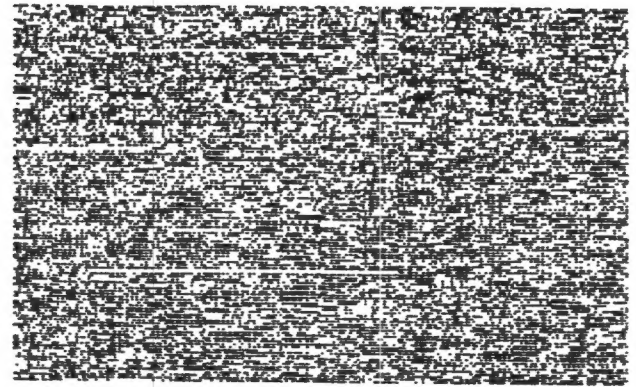
Lets look at the next column now, the top picture is code in the display file. In the next picture you have code again, but this time it does not fill the screen. The next picture is a basic program in data format, but unmistakable basic. This will give you a good idea of how much space numbers take up with number tokens and the five bytes following. Below you can see a typical data format of a screen display, hope this will help you with the program.
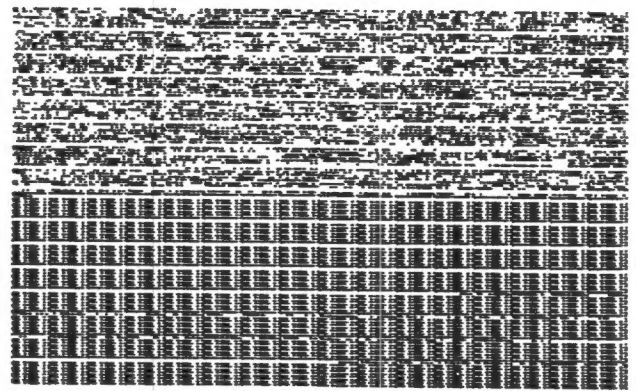
Last month I mentioned that one could only retrieve data and that this program would not restore a disk period. Not so, I managed to write this program, so that it will restore a disk, with the exception


```
??
? CLEAR 65367???W COPY ?
?(:? RANDOMIZE USR 26688???@h?:
RANDOMIZE USR 37536???QC?: REM i
nitiallize IM2,delete BASIC
?? REM BACKUP
?B?? BEEP 1??????/200???>=??,20?
???
?ER? POKE 23658???j\?,8????: PRI
NT AT 19????,0??????: INPUT AT 0
??????,0??????;"Make backup (Y/N
)?";K$
?00? IF K$="Y" THEN BEEP 1??????
/200???>=??,20????: GO TO 8070??
?".??
?T&? IF K$="N" THEN BEEP 1??????
/200???>=??,20????: RUN
?↑?? GO TO 8005???E??
?".C? PRINT AT 19????,0??????: SA
VE /"TSTIME" LINE 9997???
'?: SAVE /"TSTML
```

of any corrupted data and the program names, the disk will be usable. Program names of course can be restored using the RESTORE/ feature in OLIGERS SAFE DOS, as to the corrupted data, guess thats to much to ask.

John Oliger has talked about adding a RENAME DISK feature to his DOS, but I feel this can easely be done with a program. Next month you will find such a program in this column. It is short and simple, only a few basic lines and some code, or you could use the new version of the DISK LIBRARY to do the same thing. I would rather see John Oliger use any space left in the 8K eprom for something else, that is of course, if there is any space left.

As to the DISK RECOVER PROGRAM, just follow the prompts, it is easy to use, and should not give you any problems. I give you a hint, I dont like programs where I have to read fifty pages of instructions, and I believe nobody else should have to either.

ADDENDUM'S * FIXES (BLOOPERS)

The Library Program last month had a few bloopers in it alright. Thats why I sat down and redone some of the sections. So much for being in a hurry.

Line 1010 should have all state-sments which are duplicated on the next line removed.

Also drives dont have to be in logical order since data is moved to "S". I also added a feature to display remaining bytes left on destination disk. Fact is there are so many changes, that it pays to send for it.

Well that's it again. I will have to take a good look at the program for next month and give you all the corrections. Sorry, but writing the RECOVER program took a while. For next month I will have the RENAME DISK program and a few other things I hope.

Till next month # 3

SAVE OUR PUBLIK SKOOLS

"It's pretty depressing, Wilcox: 24,312 dead guinea pigs and still not a clue as to why we killed them."

FROM THE PRES.

There are two computerfests coming up. Nearby the Cleveland group is sponsoring one August 26 & 27. For the West Coast and any others who wish to go is the 3rd Northwest Computerfest in Portland Oregon. If youve never attended one try it you'll like it. The bus trip from Milwaukee is 2 days 8 hrs and $121 or flying from Milwaukee is $318 if reservations made in advance.

Ham and Computer fests coming up Sat. JULY 9, the SMARC presents SWAPFEST88 Oak Creek. Amer. Legion Post

Bill on QL

We have been attending QL classes given by Lloyd Dreger. Well they have pointed out many of the advantages of the QL but also some disadvantages, at least compared to the TS2068, in the handling of the BASIC language. We did find a problem with the QL manual. In the Keyword section - KEYROW function, there is a table showing column and row. In column 128, row 5 it should read as an alpha O. Along with that I would advise redrawing some of the other characters.

The following is a boot program for all you with Trump Cards. If you have the slower disk drives the TRACK and START will change the defaults to double density instead of quad. Lines 210 thru 350 will set the matching keys to return the commands when the ALT key and that character is pressed. For example ALT and 2 will print the words delete flp2_ add the name of the program on flp2 to delete and press enter. The file will be deleted. The ALTKEY func. does not require Toolkit II but CLOCK, TK2_EXT, WMON TRACK & START do.

```
100  CLS: TK2_EXT: WMON             202 INK #10,6:PAPER #20,0
110 FLP_TRACK 40                    204 CLOCK #10,'%h:%m'
120 FLP_START 60                    206 CLS
130 CLS: REM set clock              210 ALTKEY '''','list'
135 INK #2.0                        220 ALTKEY ']','flp2_'
140 AT #2,19,1:PRINT #2,'If set     230 ALTKEY '[','flp1_'
clock "Y" else "N"'                 240 ALTKEY '\','cls #0'
150 IF yn$='Y' OR yn$='y' THEN GO   250 ALTKEY '=','dir flp1_'
TO 200                              260 ALTKEY '-','dir flp2_'
152   ELSE                          270 ALTKEY '0','format flp1_'
154      IF yn$='N' OR yn$='n' then 280 ALTKEY '9','format flp2_'
GO TO 200                           290 ALTKEY '8','flp_use mdv'
156        ELSE                     300 ALTKEY '7','mdv_use mdv'
158           GO TO 150             310 ALTKEY '6','save flp1_'
159 END IF                          320 ALTKEY '5','save flp2_'
160 INPUT #0.'YR <> MO <> DY <> HR  330 ALTKEY '4','format ram1_1440'
<> MN <> SC <> <>=ENTER KEY         340 ALTKEY '3','delete flp1_'
';yr,mo,dy,hr,mn,sc                 350 ALTKEY '2'.'delete flp2_'
170 SDATE yr,mo,dy,hr,mn,sc
200 OPEN
#10,window_96x10a432x16:WMON        Tune in next month.
```

THE QL ON NET
by Dick Cultice

When I was asked to do an article on networking the QL, little was known about the subject in our club. So one Sunday afternoon several members got together and tried it, but with little success. I should say none at all. Very many crashes and unfriendly diagnostics were seen that day. So that you do not have to go through the same thing, here are a few tips.

Getting started — Make up some net cables using speaker wire & mini. phone plugs. 3 would be enough. One 6 ft., one 10 ft. and one 20 ft. long. Toolkit II was used by us because it corrects errors in the QL ROM but you can try it without it. Only one of each type of device is needed (printer, disk drive, modem, etc), each should have their own monitor though, but if data is to be exchanged you may want disk drives on 2 separate QLs.

Set up your QL and make sure all units work. Using one of those new cables you have just completed, connect your machine to another one via the net jack located on the right rear. There are two jacks and either jack is alright to use. Here is where we made our mistake. We connected the second cable to complete the loop. This disconnected pull down resistors in the circuit. Use only one cable between each machine, with the end machines having one empathy jack. This gave a resistance of about 160 ohms across the cables.

Count Off — Each machine must be given a different number. Machines with a number less than 9, can be used as a FILE SERVER. (This is a Toolkit II function)

OK? Here is your first command: NET station number <ENTER> (note enter will be <> from now on). Station 1 through 8 can use the next command: FSERVER <>.

This command must come after the NET command. Any station may use any device connected with a file server. Stations that are servers may even access other servers in the net.

Here are a few commands that can be used to access a server. With NET 2 a server attached to a disk drive and NET 3 having a printer.

LOAD n2_flp1_filename — This loads a basic program from NET 2's disk drive to the station the command was entered on.

WCOPY n2_mdv1_ to flp2_ — This copys all files from NET 2's micro to disk drive 2 on originator.

SAVE n2_flp1_program name — Save the basic program in originator to flp1 in net 2.

COPY program name TO n3_prt — Will list the program named to printer.

You should be able to catch on using these commands. Specifying a double device such as n2_ and prt or scr or flp1_ will usually work. Try a few commands until you feel comfortable with the syntax used in each statement.

Most of the commands are given in Concepts, page 34, in the QL users manual. There are more commands that work with Toolkit. Commands that work in the background, such as print spoolers, can be used. When these commands are used, the server can use his or her station for other processing.

Net is easy to use and can be fun. Share with another station.